2. Sentiment analysis is used to understand opinions, emotions, and attitudes.

Sentiment analysis studies the subjective information in an expression: opinions, appraisals, emotions, or attitudes towards a topic, person, or entity. Expressions can be classified as **positive, negative,** or **neutral**.

3. step1. Get your data into a template.

In this case, our feedback data might be collected through various forms. E.g., google sheets, we then convert our data into a .csv or .xls file.

Step 2. identify response categories, which are a set of replies that can be grouped because they are part of the same theme, even if they're worded differently.

Step 3. Record the individual responses.

Step 4. Record your categories.

Step 5. Represent your data visually. Categorical data mostly use the bar chart; hence we utilize the bar chart based on their response categories.

4. Customer trends and behavior.

# we note that most transactions happen on debit cards

#we note that credit cards are the second most with a high number of transactions

#charge cards have the least number of transactions

#prepaid cards have the second least number of transactions

#we note that the number of transactions of prepaid cards on ATMs is mostly between 15000 and 20000 and that they're no outliers, and the mean is around 16500

# charge cards follow a normal distribution on ATMs

#we note that the debit cards are mostly skewed towards the right; hence most transactions are between 7.5 and 9.0

#prepaid cards have the highest transactions in May and June and the least number of transactions in April and September

#credit cards have the highest number of transactions in July.

#November and January have the highest number of charge cards

#debit cards have almost an endless number of transactions. Although most transactions happen in December

#Number of transactions on POS Machines increases in an ascending order where May has the least number of the transaction while December has the highest

#debit cards and credit cards have the highest number of transactions; hence they should be produced more.

Recommended product strategy

1. interswitch should provide more debit cards and Credit cards and produce more debit cards in December and more credit cards in July.

2. We should provide more prepaid cards in May and June and at least in April and September.

3. increase the number of products on credit cards in July.

4. Produce more charge cards in November and January.

5. Produce least POS Machines in May and More in December.